

Assembly

Refer to **Figure 41** for this procedure.

1. If removed, screw the pilot screw assembly (A, **Figure 25**) into the exact same position (same number of turns) as recorded during disassembly.

NOTE

*If a new pilot screw is being installed, turn it out the number of turns indicated in **Table 1** from the **lightly seated position**.*

2. To assemble the vacuum cylinder (**Figure 11**), perform the following.

- a. Insert the jet needle (**Figure 42**) into the vacuum cylinder.
- b. Insert the spring in the end of the needle holder.
- c. Secure the end of the needle jet holder with a 8 mm socket or Phillips head screwdriver (**Figure 12**) and insert the holder into the vacuum cylinder. Turn the needle jet holder 90° *clockwise* to lock the holder in place within the vacuum holder.

3. Install the vacuum cylinder into the carburetor body. Align the tab on the diaphragm with the hole (**Figure 43**) in the carburetor body.

4. Install the vacuum cylinder compression spring (**Figure 9**) into the vacuum cylinder.

5. Insert your index finger into the venturi and hold the vacuum cylinder up to almost the full open position. This will help eliminate pinching the diaphragm when the top cover is installed.

6. Align the hole in the vacuum cylinder (A, **Figure 44**) with the raised boss on the top cover (B, **Figure 44**). Install the top cover and tighten the screws securely.

7. Install the needle jet with the chamfered end facing *up* toward the needle jet holder (**Figure 45**).

8. Install the main jet holder (**Figure 46**).

9. Install the main jet (**Figure 23**).

10. Install the slow jet (**Figure 47**).

11. Install the starter jet (**Figure 21**).

12. Install the plug (**Figure 20**).

13. Install the needle valve (**Figure 19**) onto the float.

14. Install the float and needle valve and install the float pin (**Figure 18**).

15. Install the main jet baffle (**Figure 17**).

16. Inspect the float height and adjust if necessary as described in this chapter.

17. Install the drain screw (**Figure 27**) and O-ring seal into the float bowl. Tighten securely.

18. Install the gasket in the float bowl (**Figure 28**).

19. Install the float bowl and tighten the screws securely (**Figure 16**).

20. Install the primer valve spring (**Figure 15**) and assembly (**Figure 14**) to the float bowl and tighten the screws securely.

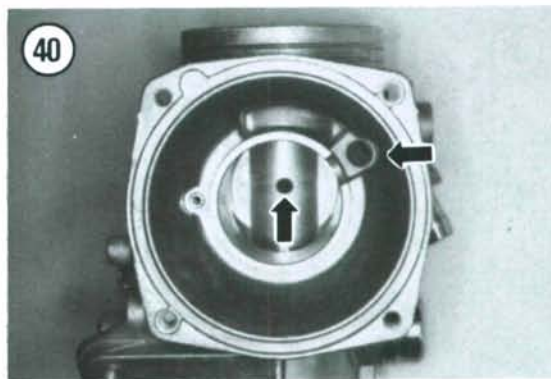
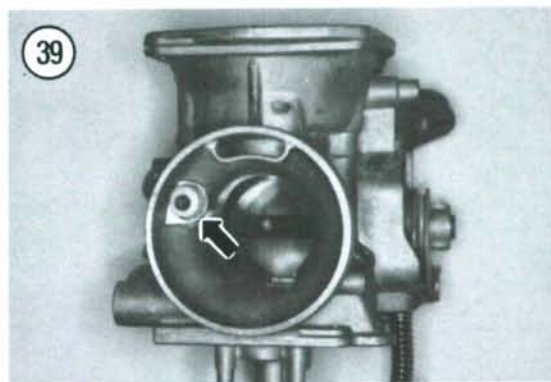
21. Connect the hose onto the carburetor body.

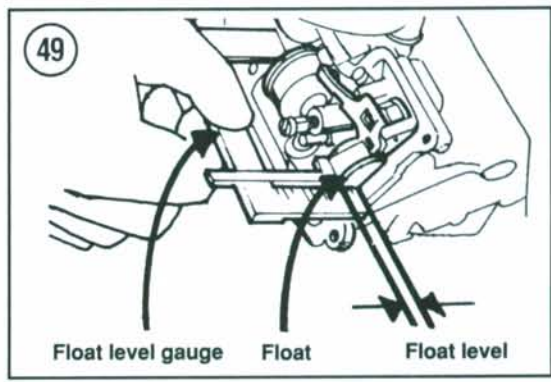
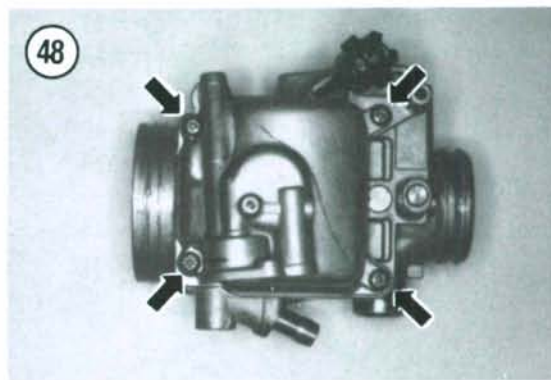
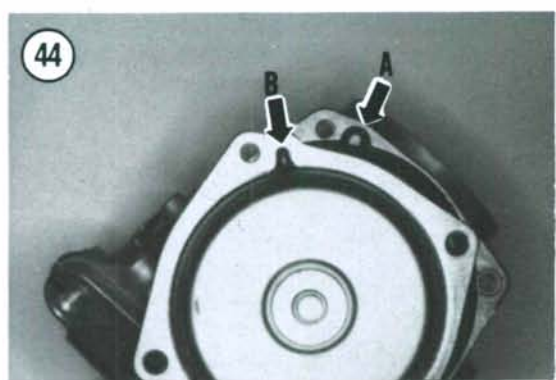
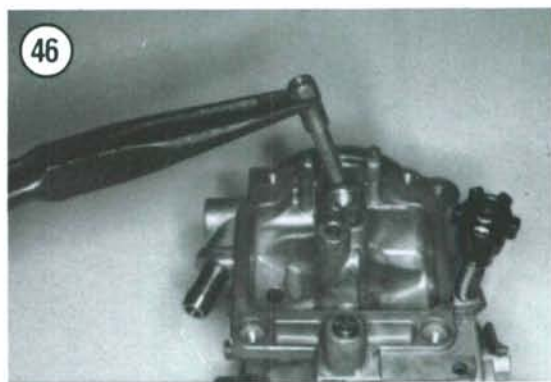
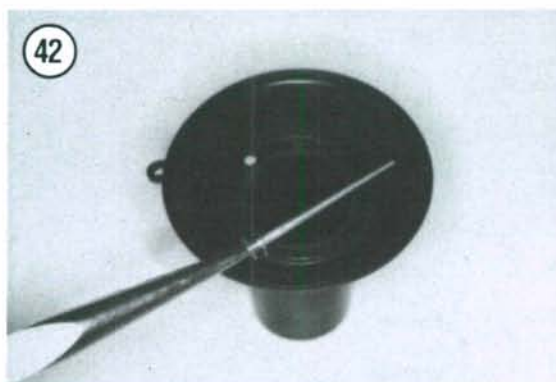
22. Screw the throttle adjust screw (A, **Figure 26**) and spring back into the carburetor body adjacent to the throttle wheel.

23. After assembly and installation are completed, adjust the carburetors as described in this chapter.

CARBURETOR ADJUSTMENTS

Idle Speed and Pilot Screw Adjustment are covered in Chapter Three.

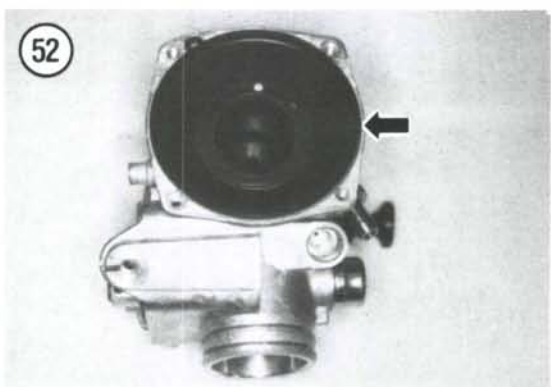
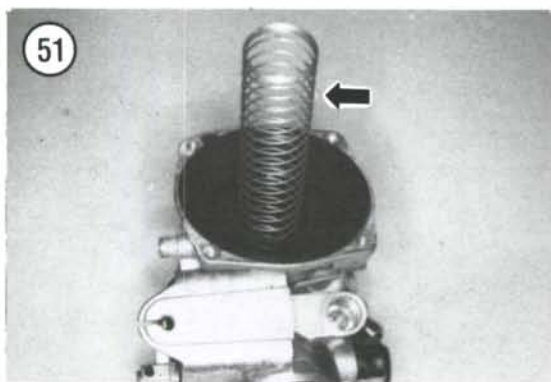
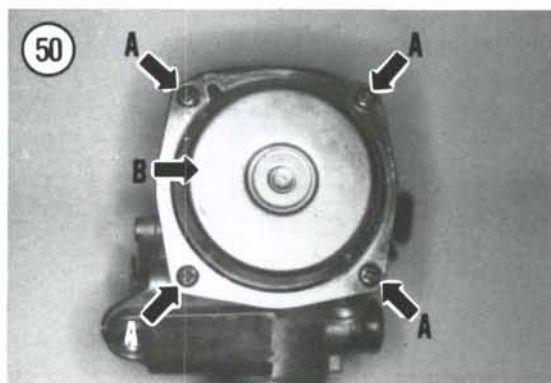




Float Adjustment

The carburetor assembly has to be removed and partially disassembled for this adjustment.

1. Remove the carburetor as described in this chapter.
2. Remove the screws (**Figure 48**) securing the float bowl and remove float bowl.
3. Hold the carburetor so the float arm is just touching the float needle—not pushing it down. Use a float level gauge, vernier caliper or small ruler (**Fig-**



ure 49) and measure the distance from the carburetor body to the float. The correct height is listed in **Table 1**.

4. The float assembly is all plastic and cannot be adjusted. If the float level is incorrect, the float assembly must be replaced.
5. Reassemble and install the carburetor.

Needle Jet Adjustment

The position of the needle jet can be adjusted to affect the fuel/air mixture for medium throttle openings.

It is not necessary to remove the carburetor, but the top of the carburetor must be removed for this adjustment.

1. Remove the carburetor as described in this chapter.
2. Remove the screws (**A**, **Figure 50**) securing the carburetor top cover to the main body and remove the cover (**B**, **Figure 50**).
3. Remove the vacuum cylinder spring (**Figure 51**).
4. Remove the vacuum cylinder (**Figure 52**). Carefully work the diaphragm away from the main body and lift the vacuum cylinder out of the carburetor.
5. Remove the jet needle (**Figure 53**) as follows.
 - a. Put a 8 mm socket or Phillips head screwdriver down into the vacuum cylinder cavity and onto the needle jet holder.
 - b. Turn the holder 90° *counterclockwise* to unlock it from the tangs within the vacuum cylinder. Remove the needle jet holder and spring (**Figure 54**).
 - c. Remove the jet needle (**Figure 55**).

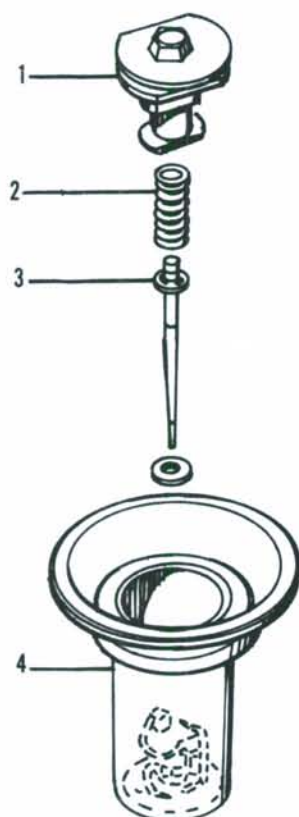
NOTE

Record the clip position prior to removal.

6. Raising the needle (lowering the clip) will enrich the mixture during mid-throttle opening, while lowering the needle (raising the clip) will lean the mixture. Refer to **Figure 56**.

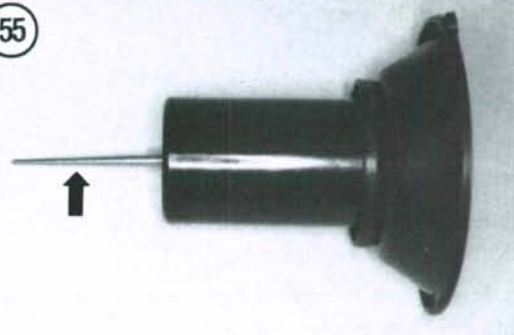
7. Refer to **Table 1** for standard clip position.
8. To assemble the vacuum cylinder (**Figure 53**), perform the following.
 - a. Insert the jet needle (**Figure 57**) into the vacuum cylinder.
 - b. Insert the spring in the end of the needle holder.

53

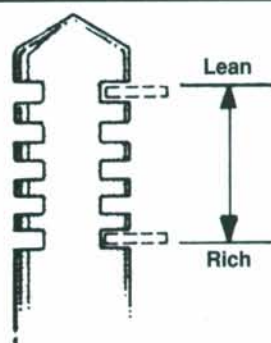
JET NEEDLE ASSEMBLY

1. Holder
2. Spring
3. Jet needle
4. Vacuum cylinder

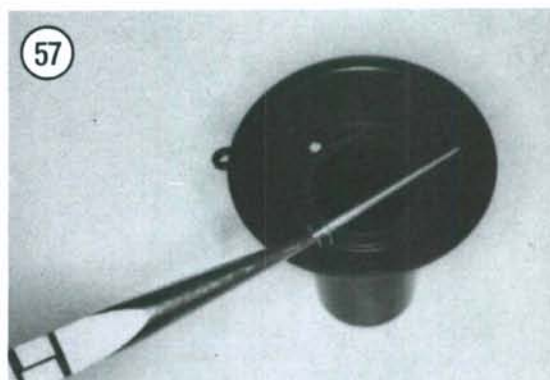
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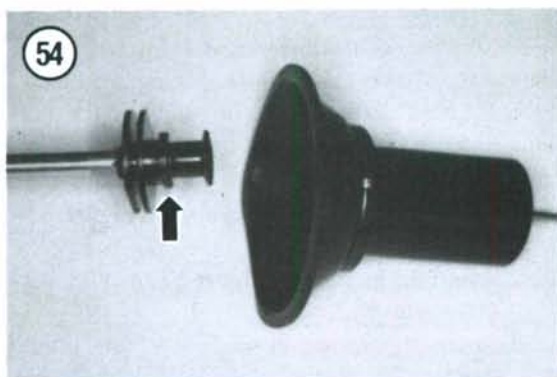
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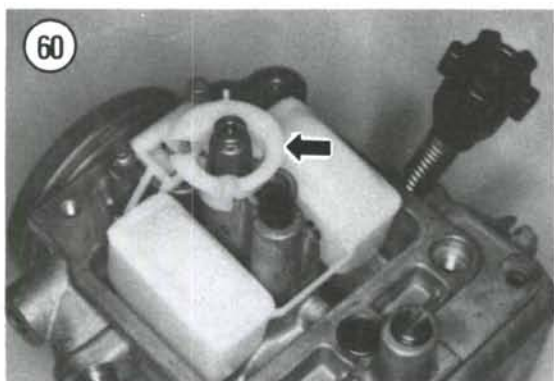
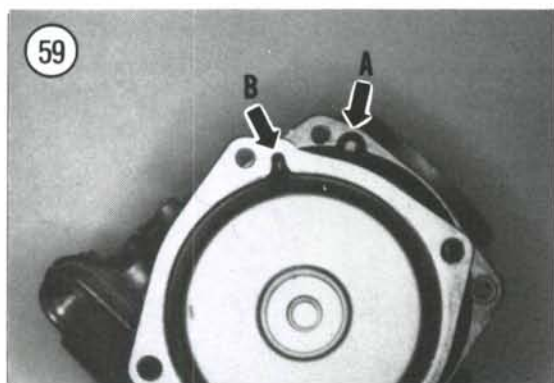
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58



- c. Secure the end of the needle jet holder with a 8 mm socket or Phillips head screwdriver (**Figure 54**) and insert the holder into the vacuum cylinder. Turn the needle jet holder 90° clockwise to lock the holder in place within the vacuum holder.
9. Install the vacuum cylinder into the carburetor body. Align the tab on the diaphragm with the hole (**Figure 58**) in the carburetor body.
10. Install the vacuum cylinder compression spring (**Figure 51**) into the vacuum cylinder.



11. Insert your index finger into the venturi and hold the vacuum cylinder up to almost the full open position. This will help eliminate pinching the diaphragm when the top cover is installed.
12. Align the hole in the vacuum cylinder (A, **Figure 59**) with the raised boss on the top cover (B, **Figure 59**). Install the top cover (B, **Figure 50**) and tighten the screws securely (A, **Figure 50**).
13. Install the carburetor as described in this chapter.

High Altitude Adjustment

Make sure the pilot jet is adjusted properly before performing this procedure.

If the vehicle is going to be ridden for any sustained period of time at high altitudes (1,000-2,500 m/3,000-8,000 ft.), the carburetor must be readjusted to improve performance and decrease exhaust emissions.

The carburetor is set with a standard main jet for normal sea level conditions. If the vehicle is run at higher altitudes or under heavy load—deep sand or mud—the main jet should be replaced with a one-step smaller size to prevent the engine from running too rich and carboning up quickly.

1. Place the vehicle on level ground and set the parking brake or block the wheels so the vehicle will not roll in either direction.
2. Remove the carburetor as described in this chapter.
3. Remove the screws securing the float bowl (**Figure 48**) to the carburetor body and lift the float bowl off.
4. Remove the main jet baffle (**Figure 60**).
5. Remove the main jet (**Figure 61**) and replace it with the factory recommended high altitude size, see **Table 2**.
6. Make sure the gasket is in place in the float bowl (**Figure 28**).
7. Install the float bowl and tighten the screws securely (**Figure 48**).
8. Turn the pilot screw in from the factory pre-set position as indicated in **Table 2**.
9. When the vehicle is returned to lower altitudes (near sea level), the standard main jet must be reinstalled and the pilot screw must be returned to its original position. Readjust the idle speed to the speed listed in **Table 1**.

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